SAFETY INSTRUCTIONS

1. Please read these safety instructions carefully.
2. Please keep this User's Manual for your reference.
3. Please disconnect the equipment from your AC outlet before cleaning.
   Do not use liquid or sprayed detergent for cleaning.
   Use moist sheet or cloth for cleaning.
4. For pluggable equipment, the socket-outlet shall be installed near the equipment and shall be easily accessible.
5. Please keep this equipment away from humid areas.
6. Install this equipment on a reliable surface. If the equipment is not on a reliable surface, it may drop and cause injury.
7. The openings on the enclosure are for air convection. Please protect the equipment from overheating . DO NOT COVER THE OPENINGS.
8. Make sure the voltage of the power source is appropriate when connecting the equipment to the power outlet.
9. Place the power cord where people will not step or trip on it. Do not place objects over the power cord.
10. All Cautions and Warnings on the equipment should be noted.
11. If the equipment is not in use for several days, disconnect the equipment from the power outlets to avoid damage by transient power surges.
12. Never pour any liquids into the openings, this could cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should only be opened by qualified service personnel.
14. If one of the following situations arises, get the equipment checked by a qualified service personnel:
    (a) The power cord or plug is damaged.
    (b) Liquid has penetrated into the equipment.
    (c) The equipment has been exposed to moisture.
    (d) The equipment has not worked well or you can not get it to work according to the user's manual.
    (e) The equipment was dropped and damaged.
    (f) If the equipment has obvious signs of damage.
15. DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT UNCONDITIONED; STORAGE TEMPERATURE ABOVE 60℃(140℉), IT MAY DAMAGE THE EQUIPMENT. The sound pressure level at the operators position according to IEC704-1:1982 is equal or less than 70dB(A)
16. DANGER: Invisible laser radiation when opened. Avoid direct exposure to beam.
    Complies with FDA radiation performance standards,21 CFR, subchapter J.
    Laser power: Wave Length:783±3nm
    Emission power:0.7mW
    Laser diode: class 3b

PRECAUTIONS

<div style="color:red; border:2px solid black;">

!! Do not attempt to open the drive and service it. Removing the cover may cause exposure to harmful laser beams and electrical voltage. User is recommended to get service by returning the defective drive back to the original vendor where the drive was purchased.

</div>

- Use the original package for transporting the drive or sending back for service. The original packing was designed and tested to protect your drive under rough conditions.
- Do not put this drive in direct sunlight, on heating units, or near electrical appliances which draw large amounts of current.
- Use a soft, dust-free cloth for cleaning your drive. Keep your drive away from moisture or liquids including water, cleaning-fluids, or solvents.
- Keep your CD-R/RW disc clean. Using a soft, dust-free cloth to clean the surface of the CD-R/RW disc before recording will improve the burning data integrity.
- Do not drop or jolt the drive.
- Keep the area around the drive clean from dust, smoke, and other contaminants.
- The copyright law of each country governs the reproduction of copyrighted works. The person using the drives may be liable for its use to make unauthorized copies of copyrighted works.
- It will increase the success rate for copying the data from HDD, instead of copying the data by "copy on the fly mode". Therefore we recommend the user reserving sufficient buffer space (at lease 800 MB).

TABLE OF CONTENTS

INTRODUCTION

Thank you for purchasing this drive, a reliable, high-performance CD rewriter, CD recorder and CD reader. Please read this manual carefully and keep it handy for easy reference. Use the manual for installation, operation and troubleshooting for this drive.

What the Drive Does

The drive is a CD-ReWritable drive that provides professional quality CD performance for writing, rewriting and reading. This versatile and remarkable drive can:

- Write to CD-R (recordable CD) media.
- Write to ultra-speed CD-RW (rewritable CD) media.
- Read all CD-ROM and CD-R media.

(NOTE: The drive's maximum Writing, ReWriting, & Reading speeds are printed on the original box.)

The drive supports Running OPC (ROPC) and is compatible with Windows Plug & Play. Flash memory allows upgrading the drive to the latest firmware revision (available from the web site) without opening the drive. Buffer Underrun Proof technology eliminates buffer underrun errors, therefore you can safely use your computer for other things while you're writing to a CD-R or CD-RW disc.

Format Compatibility

This drive is a versatile optical disk drive. For write function, it is capable to write data, which conform to Orange Book Part2/ part3 volume2: high speed / part3 volume3: ultra speed, into CD-R/RW disk in combination with write application software. For read function, it reads all of CD formats and media: CD-DA, CD-ROM, CD-ROM/XA, Photo-CD, Multi-session, Karaoke-CD, Video CD, CD-I FMV, CD Extra, CD Plus, CD-R, and CD-RW.

Recording Modes

Track at Once

Data can be recorded to a disc, one track at a time. New tracks can be added later. Music CDs can not be played in a CD player or CD-ROM until the disc is closed.

Disc at Once

Data can be recorded to an entire disc in one pass. In this mode, new data added later is not allowed.

Session at Once

Data can be recorded to disc one session at a time. New sessions can be written later in this mode. More disc space can be used because there is no gap between tracks.

Multi session

Data can be recorded to disc in one session. New sessions can be written later in this mode. Less disc space can be used because a gap is created between sessions.

Packet Writing

This is useful for data back up. Data can be added directly to tracks on CD-R/RW media or can be deleted directly from tracks only on CD-RW media. To use this mode, your software must support Packet writing function.

What You Can Do with the Drive

- Record data or audio onto recordable or rewritable CD media.
- Play music CDs.
- Play VCD movies.
- Save photos and other images on recordable or rewritable CDs.
- Archive images and video to CD.
- Master new software programs on CD.

SYSTEM CONFIGURATION

System Requirements for USB 1.1

This drive has a high-speed Universal Serial Bus (USB) 2.0 interface. You can also use it with USB version 1.1. To ensure stable read/write/rewrite performance, an IBM compatible PC system with the following features is recommended.

CPU	Pentium III 500 MHz or higher with built-in USB 1.1 controller (some USB controllers or motherboards may not support all types of USB devices.)
OS	Microsoft Windows 98SE/ME/2000/XP
Memory	Must meet recommended RAM requirements for your operating system. (minimum 256MB is recommended)
CD-ROM Drive	For software installation
Hard Drive	Minimum 650MB available capacity for creating a CD image file; 5GB free HDD space for creating a DVD image file. *(Do not enable HDD thermal calibration during operation)*
Interface	USB interface connector

NOTE:

(1) Connecting USB 1.1 interface the drive's top performance is 4X for CD-R, 4X for CD-RW and 6X for reading a CD-ROM.

(2) Some high-speed hard drives are equipped with an "Auto Thermal Re-calibration" function. Please disable it in the BIOS setup to avoid writing errors (Buffer Under-run).

Additional Requirements for USB 2.0

Interface	High Speed USB 2.0 interface required to achieve maximum speeds

NOTE:

(1) High Speed USB 2.0 adapter card is sold separately and will not be bundled in this package.

(2) To achieve maximum record/write speed your system may require data to be copied first to the computer's hard drive rather than directly from another source disc or drive.
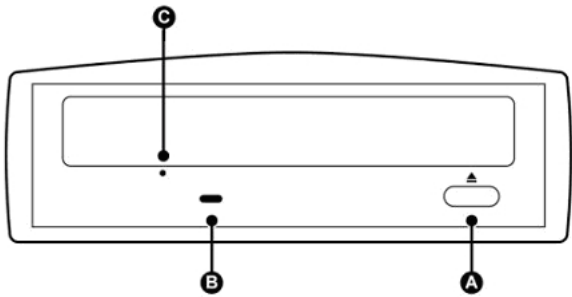
FEATURES AND CONTROLS

Front View

Figure: Front view of the drive

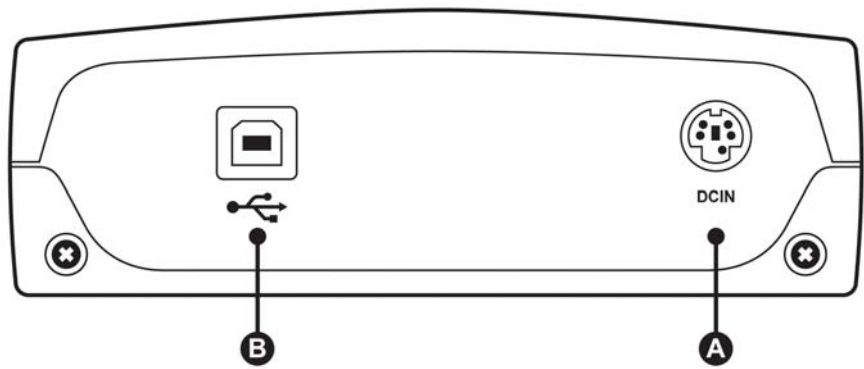| A	Eject/Close Button	Push button to eject/close the tray.
B	Busy / Write LED	Indication of drive's operation status. The light lit stands for Busy; the light blinking stands for Write/Rewrite.
C	Emergency Eject Hole	In case the Eject button isn't working, insert a small stick or paper clip into this hole to eject the tray. *Note: Turn off the power before doing this manual ejection.*

Rear View

Figure: Rear view of the drive

A	Power Connector	Five-pin connector for DC power input.
B	USB Connector	Standard USB B type jack.

USB 2.0 USERS

USB 2.0 is a very new technology. Therefore, most computers do not have native support for USB 2.0. You must install a USB 2.0 adapter card for your External drive to run at USB 2.0 speeds. If you do not have a USB 2.0 card installed, this drive will still work connected to a standard USB 1.1 connection, but the speed will be limited to USB 1.1 speed. After installing a USB 2.0 adapter card, follow the steps below for your operating system to verify the USB 2.0 card is installed properly.

Windows® 98SE/ME users:
Right click My Computer and select Properties.
Select the Device Manager tab.
If there is a yellow exclamation point next to Universal Serial Bus Controllers, contact the card's manufacturer for help.

Windows® 2000/XP users:
Right click My Computer and select Properties.
Select the hardware tab.
Click the Device Manager button.
If there is a yellow exclamation point next to Universal Serial Bus Controllers, contact the card's manufacturer for help.

Instructions on Installing the USB Driver for Windows 98SE:
This USB drive is a Plug&Play USB storage device. If you are using any of the following Operating Systems: such as Windows ME, Windows 2000, and Windows XP, all you need to do is plug it to your computer properly. Then the drive is ready to use.

Whereas, a PC using the Windows 98SE OS will not recognize this USB drive if you are installing this drive for the first time. Therefore, you will need to install a driver into your computer for this USB drive to properly install to your computer.
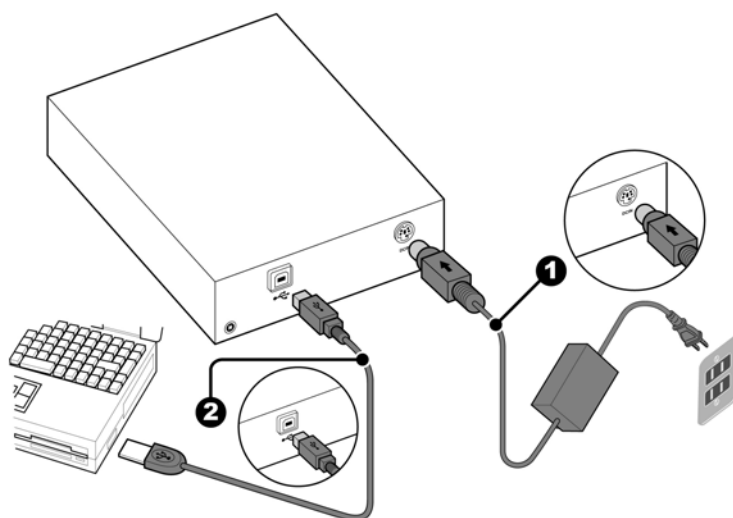
You can find the USB driver for Windows 98SE OS either in the included Floppy Disc or in the USB driver for Windows 98 OS directory of the Burning Software kit. Please follow your OS instructions to install the driver for this USB drive, then restart your computer.

CAUTION:
Please limit your recording speed to 4X or 8X if your computer is only equipped with a slower speed USB1.1 interface or if your PCMCIA port does NOT support Card Bus interface. Attempting high speed writing with a slow interface can cause frequent buffer overloading and writing pauses (when the Busy LED is blinking) that could adversely affect recording quality.

CONNECTION

1. **Connecting the Power Supply Cable.**
2. **Connecting Hi-Speed USB 2.0 Cable.**

INSTALLING THE DRIVE

1. **Start your computer. Wait for the operating system to load, then insert the CD kit. Follow the instructions on the screen to install the Recording Software from CD kit.**

   (The CD kit contains the system software necessary to use your CD-RW drive.)

2. **Connect the power supply to the drive.**

   (To prevent damage to the power plug, connect carefully to avoid bending the power plug.)

3. **Attach the included Hi-Speed USB cable B type plug to the drive.**

   (Examine the connection carefully for the correct orientation.)

4. **Connect the A type plug end of the Hi-Speed USB cable to the USB 2.0 adapter card connection on your computer. The drive is ready to use.**

   (NOTE: If you cannot identify the USB 2.0 connection, refer to the documentation of your USB 2.0 card. If you do not have a USB 2.0 adapter card installed, you can still connect the drive to a standard USB 1.1 connection.)

5. **Special notes for Windows 98SE user.**

   If this is the first time you are installing this USB drive to your Windows 98SE (Second Edition) Operating System, you will have to install a USB driver for your Windows 98SE. Follow the instructions on the screen to install the USB driver properly, then restart your computer. (For more details, please refer to the USB 2.0 Users page.)

OPERATION

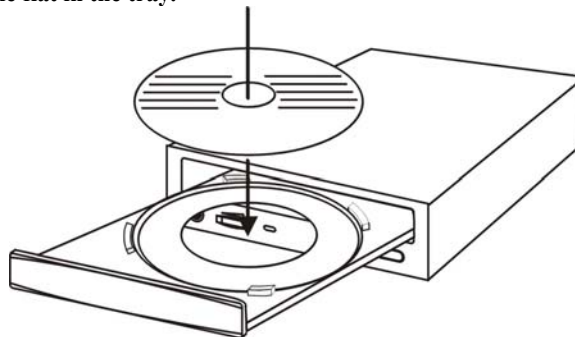### Installing Necessary Device Drivers

In Windows, the drive acts as a "CD-ROM Drive" for purpose of installation and setup. In some cases, you will need to install additional software to make use of all the features of the drive.

To use the drive on a computer:
◆ **As a CD-ROM drive:** Most Windows Operating Systems (Windows XP, Windows ME, Windows 2000, Windows 98, and Windows 95) supply a generic CD-ROM device driver that allows the drive to function as a standard CD-ROM drive. You do not need to install anything else.

◆ **As a CD-R/CD-RW drive:** In order to write to CD-R or CD-RW media, you will need additional software. The Recording software kit included with the package will offer you function like mastering CDs, backing up your hard disk or files, capturing audio, duplicating CDs, and more.

Loading and Unloading the Tray
(1) **While the drive is powered up, push the Eject button on the front panel. The tray drawer slides out in a few seconds.**
(2) **Lay a disc with the label facing up in the depression of the tray. The disc should lie flat in the tray.**

Figure: Loading the Tray

(3) **Press the Eject button again and the tray will slide shut within seconds.**

RECORDING CDS

Before you start, please make sure you have installed the proper software for Recording CDs.

Recording Software & Manuals

The included Recording software is to give you the best result with ease of use. The detailed user's manual for the recording software will be automatically installed into your computer when you install the recording software. Please refer to the user's manual for the detailed operation procedures.

Discs

You may use conventional Read-only discs or CD-R/RW discs with your rewriter.

Recommended CD-R/RW Media

Some CD-R/RW media may not be possible to write on, due to differences in the manufacturing quality. We recommend you use CD-R/RW media from the following manufacturers that have been proven satisfactory with our drive.

CD-R Media:	COMPACT disc Recordable	4M, AMT, CMC, Csita, Cursor, Delphi, DST, E-TOP, ESPRIT, Ever Media, Fornet, Fujifilm, GAT, GigaStor, GQ, InfoDisc, KingPro, Kodak, LeadData, Maxell, Mitsubishi, Memorex, Mirage, Mitsumi, MoserBaer(India), MPO, NanYa, Plasmon, Postech, Princo, Prodisc, RAMedia, Ricoh, Ritek, SAST, SKC(Korea), SONY, Taroko, TDK, TY, Verbatim
Low Speed CD-RW Media:	COMPACT disc ReWritable	AMT, CdBoss, CMC, CompUSA, DataStone, Ever Media, Fornet, Gigadata, GigaStor, LeadData, Maxell, MBI, MCW, Mitsubishi, Philips, Pony, Power, Princo, Ricoh, Ritek, TetaSys, Verbatim, Winner
High Speed CD-RW Media:	COMPACT disc ReWritable High Speed	AMT, CMC, CompUSA, Cursor, Fornet, Imation, Infodisc, Maxell, Mitsubishi, NanYa, Plextor, Postech, Prodisc, Ricoh, Ritek, SKC(Korea), TDK
Ultra Speed CD-RW Media:	COMPACT disc ReWritable Ultra Speed	CMC, DAXON, InfoDisc, Mitsubishi, NanYa, ProDisc, Ricoh, Ritek, SKC(Korea)

NOTE: Subject to change without further notice.

PLAYING CDs

Playing Audio CDs

In order to listen to an audio CD, connect an audio cable to the analog audio connector on the rear of the drive and connect the other end to your sound board.

To listen to music through the computer's sound board, you can control volume with the volume control on the Windows Media Player or CD Player Taskbar. You can also mute the sound on your sound board and listen to music through headphones or self-powered speakers.

TROUBLESHOOTING

If you meet any trouble during installation or normal use of your CD-RW drive, please refer to the following information.

Read Problems

Symptom	Possible Causes	Solutions
No operation.	No power.	• Check if the power cord is connected securely to the connector.
	USB cable isn't connected properly.	• Ensure that the USB cable and connectors are not damaged, bent or dented. Check especially the pins.
No CD-RW drive recognition.	Power is not switched on.	• Check if LED of your CD-RW drive is lit. If not, there is no power.
	USB cable is not connected properly between the computer USB port and CD-RW drive.	• Ensure that both connectors of the USB cable is properly connected to the USB ports on the computer and the CD-RW drive.
	USB CD-RW drive is not recognized by the Windows Operating System.	• Please refer to the USB 2.0 Users chapter and check if the USB driver is installed properly.
No sound from external speaker when you're playing a music CD.	The sound board isn't working properly.	• Connect speakers to the headphone jack of your CD-RW drive while playing a music CD. If you hear sound from the speakers, the drive is working fine. • Ensure that your CD-RW drive is correctly linked to the computer. • Check if the (MCI) CD-Audio driver is installed.
Low sound level from CD-RW drive	Improper level setting in Windows audio mixer	• Check if the Masters, CD and Line levels in every audio mixer are correct.
Excessive noise when reading.	Eccentric disc loaded.	• Replace it by another one.
	Seal attached on the surface	• Detach the seal very carefully. Don't make any scratches.
• Cannot view photo CD discs. • Can read only first session of a multi-session disc. • Receive error messages while reading photo CD images.	Bad photo CD disc.	• Try to play another photo CD disc and see if it reads fine. If it works, you should replace the defective disc.
Can read only the first session of a multi-session disc.	"Close Disc" was not selected at the previous writing.	• Additional session cannot read because the session of former data writing closed. Rewrite on other CD-R/RW media.

Symptom	Possible Causes	Solutions
Cannot open the lid (Eject).	Eject locked by software.	• Stop the applying software and try the eject button to open the lid.
	CD set incorrectly.	• pull the Lever on the bottom of the drive forward to open the lid cover.
• Cannot read the former session of the CD-RW disc which has been written at least twice. • Read error occurs.	"Load Contents" or "Import Session" was NOT clicked on the Software.	• If recorded without checked "Load Contents" or "Import Session", it is impossible to read. But when using utility software such as "Session Selection" from Adaptec, the former session can be read.
	Defective CD-ROM disc.	• Deep scratches, fingerprints or other contaminants on the discs surface can disable the drive from reading data. Always keep it clean.
• Cannot read the former session of the CD-RW disc which has been written at least twice. • Read error occurs.	Music CD inserted.	• Because audio compact discs do not have computer data, typing computer commands while an audio CD is in your drive will result in an error message.
	Disc inserted upside down.	• Remove the disc from tray and reinsert it with the label side up.
Can not initialize CD-RW disc written by Packet Write with other CD-ROM drive.	The CD-RW disc is in the drive formatted with "Random Write".	• A CD-ROM drive cannot initialize/read any CD-R/RW disc formatted by "Random Write". If you want to read the disc, please use a CD-RW drive, or download from Adaptec WEB site and install UDF Reader on your PC, which enable CD-ROM drives to read "Random Write".

Write Problems

Symptom	Possible Causes	Solutions
Cannot write.	Using other authoring software which not supports your CD-RW drive.	• Use the authoring software provided with the CD-RW drive. When using other software, ensure your CD-RW drive is supported by contacting the software supplier.
	Disc inserted upside down.	• Reinsert the disc with label side up.
	Short of Hard Disk capacity.	• Generally 1.2 to 2 times the size of the write data is required. This may vary according to the write method.
	No power.	• Check if the power cord is securely connected to the connector.
	USB cable isn't connected properly.	• Ensure that the USB cable and connectors are not damaged, bent or dented. Check especially the pins.
Writing errors occur (Buffer under-runs).	• Network used. • Mouse moved or window screen saver activated while writing. • Other application running.	• When running mouse, screen saver moving or other applications or writing in a network environment, errors may occur due to lack of CPU resources in PC. • Rewrite after log-off from the network. • Deactivate the screen saver or power saving mode. • Quit other applications other than the authoring software.
	Short of PC memory.	• Due to short of main memory in PC, swapping of hard disc space may have occurred. If swapped, data from the hard disc may cut off causing buffer under-runs. • Increase main memory capacity.
	"Auto thermal re-calibration" triggered.	• Disable "Auto thermal re-calibration" in the BIOS setup. • Use another Hard Disk if can not disable it.
	Defective CD-R/RW media.	• CD-R/RW media may be dirty, scratched or damaged. Rewrite on another CD-R/RW media.
	Short of Hard Disk capacity.	• Generally 1.2 to 2 times the size of the write data is required. This may vary according to the write method.
No drive recognition.	USB cable is not connected properly between the computer USB port and CD-RW drive.	• Ensure that both connectors of the USB cable is properly connected to the USB ports on the computer and the CD-RW drive.

Symptom	Possible Causes	Solutions
	USB CD-RW drive is not recognized by the Windows Operating System.	• Please refer to the USB 2.0 Users chapter and check if the USB driver is installed properly.
	Using other authoring software which not supports your CD-RW drive.	• Use the authoring software provided with your CD-RW drive. When using other software, ensure your CD-RW drive is supported by contacting the software supplier.
Cannot add writing on CD-RW.	Wrote with other authoring software.	• If different authoring software is used comparing to the previous writing, errors may occur. Use always the same authoring software.
	Short of CD-R/RW capacity.	• Capacity of CD-R/RW media is limited to 650MB (74 min-type) including lead-in, lead-out and TOC data. Use a new CD-R/RW media if the capacity is insufficient for the additional data.
Can not write at highest speed.	CD-R/RW media not compatible with highest speed.	• Use the highest speed compatible discs or write with lower speed.
	Buffer under-run occurs.	• Refer to the "Buffer under-run" item.
	Defective CD-R/RW media.	• CD-R/RW media may be dirty, scratched or damaged. Rewrite on another CD-R/RW media.
	Using other authoring software not bundled with your CD-RW.	• Use the authoring software provided with your CD-RW drive. When using other software, ensure your CD-RW drive is supported by contacting the software supplier.